



03-26-04

PATENT  
ATTORNEY DOCKET NO. 03848-00094

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
 )  
Martin Goldberg, Martin Diggelman, ) Examiner:  
Earl A. Hubbell, Glenn McGall, )  
Nam Quoc Ngo, MacDonald Morris, )  
Mel Yamamoto, Jennifer Tan, and )  
Richard P. Rava )  
 )  
Serial No.: 10/722,032 ) Art Unit:  
 )  
Filed: November 25, 2003 )  
 )  
Title: SUBSTRATE PREPARATION PROCESS )

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

TRANSMITTAL LETTER

In regard to the above identified application, we are transmitting herewith the attached:

1. Information Disclosure Statement,
2. Form PTO-1449 (3 pages), and
3. Return postcard.

With respect to additional fees, no additional fee is required. The Commissioner is hereby authorized to charge any additional fees or credit overpayment to Deposit Account No. 19-0733.

Respectfully submitted,

Dated: March 25, 2004

By:   
John P. Iwanicki, Reg. No. 34,628  
BANNER & WITCOFF, LTD.  
28 State Street, 28th Floor  
Boston, MA 02109  
(617) 720-9600

EV436812846US



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**INFORMATION DISCLOSURE STATEMENT**

Pursuant to 37 C.F.R. §§ 1.97-1.99, Applicants hereby submit the enclosed PTO Form 1449. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. § 1.56 and is being filed before receipt of a first Office Action on the merits.

Under 35 USC §120, this application relies on the earlier filing dates of application serial number 09/716,507, filed on November 20, 2000, now U.S. Patent No. 6,706,875; application serial number 09/244,568, filed on February 4, 1999, now U.S. Patent No. 6,307,042; and application serial number 08/634,053, filed on April 17, 1996, now U.S. Patent No. 5,959,098.

USSN 10/722,032  
Express Mail Receipt No. EV 436812846 US

Hard copies of the references identified on the PTO Form 1449 were submitted to and/or cited by the Office in the prior patent applications and, therefore, are not provided in this application.

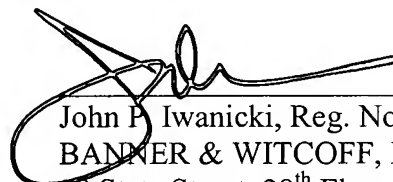
In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative importance of any portion of the references. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. § 102 or § 103.

Please apply any charges or credits to Deposit Account No. 19-0733.

Respectfully submitted,

Dated: \_\_\_\_\_

*March 25, 2004*



John P. Iwanicki, Reg. No. 34,628  
BANNER & WITCOFF, LTD  
28 State Street, 28<sup>th</sup> Floor  
Boston, MA 02109  
(617) 720-9600



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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 3

**Complete if Known**

Application Number	10/722,032
Filing Date	November 25, 2003
First Named Inventor	Martin Goldberg
Group Art Unit	
Examiner Name	
Attorney Docket Number	03848-00094

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (if known)			
	1	US- 4,016,855	04-12-1977	Mimata	
	2	US- 4,401,796	08-30-1983	Itakura	
	3	US- 4,458,066	07-03-1984	Caruthers et al.	
	4	US- 4,500,707	02-19-1985	Caruthers et al.	
	5	US- 4,507,433	03-26-1985	Miller et al.	
	6	US- 5,143,854	09-01-1992	Pirrung et al.	
	7	US- 5,202,231	04-13-1993	Drmanac et al.	
	8	US- 5,242,974	09-07-1993	Holmes	
	9	US- 5,384,261	01-24-1995	Winkler et al.	
	10	US- 5,424,186	06-13-1995	Fodor et al.	
	11	US- 5,445,934	08-29-1995	Fodor et al.	
	12	US- 5,489,678	02-06-1996	Fodor et al.	
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	20	US- 5,631,734	05-20-1997	Stern et al.	
	21	US- 5,639,603	06-17-1997	Dower et al.	
	22	US- 5,667,972	09-16-1997	Drmanac et al.	
	23	US- 5,695,940	12-09-1997	Drmanac et al.	
	24	US- 5,700,637	12-23-1997	Southern	
	25	US- 5,723,289	03-03-1998	Eaton et al.	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (if known)				
	26	GB 2182336	05-13-1987	Nippon Telegraph		
	27	WO 92/10092	06-25-1992	Affymax Technologies		
	28	WO 93/09668	05-27-1993	Affymax Technologies		
	29	WO 94/10128	05-11-1994	Affymax Technologies		

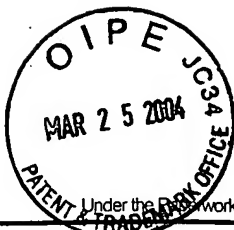
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04.

<sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

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PTO/SB/08B(10-01)

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**INFORMATION DISCLOSURE  
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Sheet 2 of 3

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Application Number	10/722,032
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	30	US- 5,764,518	06-09-1998	Collins	
	31	US- 5,837,832	11-17-1998	Chee et al.	
	32	US- 5,945,334	08-31-1999	Besemer et al.	
	33	US- 6,225,625	05-01-2001	Pirrung et al.	
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	48	WO 95/00530	01-05-1995	Affymax Technologies		
	49	WO 95/33846	12-14-1995	Affymax Technologies		
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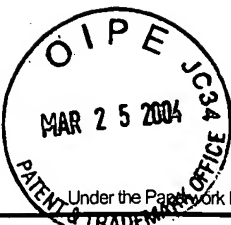
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Application Number	10/722,032
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First Named Inventor	Martin Goldberg
Group Art Unit	
Examiner Name	
Attorney Docket Number	03848-00094

**OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	57	Atkinson et al., "Solid-Phase Synthesis of Oligodeoxyribonucleotides by the Phosphitetriester Method," IRL Press, Gait, ed., Washington, D.C., Chapt. 3, pp. 35-81 (1984)	
	58	Barnett et al., "Debenzoylation of N-Benzoylnucleoside Derivatives with Ethylenediamine-Phenol," <i>Tetrahedron Lett.</i> , 22:991-994 (1981)	
	59	Beaucage et al., "Deoxynucleoside Phosphoramidites -- A New Class of Key Intermediates for Deoxypolynucleotide Synthesis," <i>Tetrahedron Lett.</i> , 22(20):1859-1862 (1981)	
	60	Caruthers et al., "New Methods for Synthesizing Deoxynucleotides," <i>Genetic Eng.</i> , 4:1-17 (1982)	
	61	Feldman et al., "Gray Code Masks for Sequencing by Hybridization," <i>Genomics</i> , 23:233-235 (1994)	
	62	Froehler et al., "Synthesis of DNA via Deoxynucleotides H-Phosphonate Intermediates," <i>Nucleic Acids Res.</i> , 14(13):5399-5407 (1986)	
	63	Froehler et al., "Nucleoside H-Phosphonates: Valuable Intermediates in the Synthesis of Deoxyoligonucleotides," <i>Tetrahedron Lett.</i> , 27(4):469-472 (1986)	
	64	Guo et al., "Direct Fluorescence Analysis of Genetic Polymorphisms by Hybridization with Oligonucleotide Arrays on Glass Supports," <i>Nucleic Acids Res.</i> , 22(24):5456-5465 (1994)	
	65	Hogrefe et al., "Deprotection of Methylphosphonate Oligonucleotides Using a Novel One-Pot Procedure," <i>Nucleic Acids Res.</i> , 21(9):2031-2038 (1993)	
	66	Jones, "Preparation of Protected Deoxyribonucleosides," <i>Oligonucleotide Synthesis: A Practical Approach</i> , IRL Press, Gait, ed., Washington, D.C., Chapter 2 (1984)	
	67	Matteuci et al., "Synthesis of Deoxyoligonucleotides on a Polymer Support," <i>J. Am. Chem. Soc.</i> , 103(11):3185-3191 (1981)	
	68	McGillis, "Lithography," <i>VLSI Technology</i> , McGraw-Hill, Chapt. 7, pp. 267-301 (1983)	
	69	Pease et al., "Light-Generated Oligonucleotide Arrays for Rapid DNA Sequence Analysis," <i>Proc. National. Acad. Sci. USA</i> , 91:5022-5026 (1994)	
	70	Polushin et al., "Rapid Deprotection Procedures for Synthesis Oligonucleotides," <i>N.A.R. Symp. Ser.</i> , No. 24, pp. 49-50 (1991)	
	71	Reichmanis et al., "O-Nitrobenzyl Photochemistry: Solution vs. Solid-State Behavior," <i>J. Polymer Sci. Polymer Chem., Ed.</i> , 23:1-8 (1985)	
	72	Sinha et al., "β-cyanoethyl N, N-dialkylamino/N-morpholinomono-chloro Phosphoamidites, New Phosphitylating Agenst Facilitating Ease of Deprotection and Work-Up of Synthesized Oligonucleotides," <i>Tetrahedron Lett.</i> , 24(52):5843-5846 (1983)	
	73	Sinha et al., "Polymer Support Oligonucleotide Synthesis XVIII: Use of β-cyanoethyl-N, N-dialkylamino/N-morpholinomono-chloro Phosphoamidite of Deoxynucleosides for the Synthesis of DNA Fragments Simplyfying Deprotection and Isolation of the Final Product," <i>Nucl. Acids Res.</i> , 12(11):4539-4557 (1984)	
	74	Sproat et al., "Solid-Phase Synthesis of Oligodeoxyribonucleotides by the Phosphotriester Method," <i>Oligonucleotide Synthesis: A Practical Approach</i> IRL Press, Gait, ed., Washington, D.C., Chapt. 4, pp. 83-115 (1984)	
	75	Young and Davis, "Efficient Isolation of Genes by Using Antibody Probes," <i>Proc. National. Acad. Sci. USA</i> , 80:1194 (1983)	
Examiner Signature			Date Considered

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